



SPECIFY NOVOCON[®] XR FIBERS:

- FOR TEMPERATURE/
SHRINKAGE AND FLEXURAL
REINFORCEMENT
- INCREASED CRACK
RESISTANCE, DUCTILITY,
ENERGY ABSORPTION OR
TOUGHNESS
- IMPROVED IMPACT
RESISTANCE
- IMPROVED FATIGUE
ENDURANCE AND SHEAR
STRENGTH
- IMPROVED DURABILITY



NOVOCON[®] XR STEEL FIBERS

Novocon XR (formerly Xorex[®]) steel fiber is a leading low carbon, cold drawn steel wire fiber concrete reinforcement. It is evenly distributed in concrete mixtures to provide improved mechanical bonding capacity exceeding most performance specifications for enhancing concrete's shear strength, fatigue endurance, impact resistance and flexural toughness. Novocon XR has been used in over 150 million square feet (15 million square meters) of slabs on ground for industrial floors. It is a reliable, cost efficient concrete reinforcement that is designed to be easy to mix, place and finish..

FEATURES & BENEFITS

- Complies with ASTM A820.
- Variable equivalent diameter and a continuously deformed shape provide reinforcement resulting in tighter, more stable joints.
- Improves the impact resistance, fatigue endurance and shear strength of concrete.
- Provides crack width control.
- Manufactured in 1.5 in and 2 in (38 mm and 50 mm) lengths to meet specific applications.
- Provides uniform, multi-directional concrete reinforcement.
- Requires less labor to incorporate into concrete applications than rebar or wire mesh.
- Offers greater project scheduling accuracy. • No special equipment is needed to mix, place or finish. • Compatible with all types of cements and concrete mixtures.
- Backed by our team of concrete experts who carefully analyze each project and provide steel fiber design recommendations to help ensure maximum product performance and cost efficiency.

COMPLIANCE

- Novocon XR steel fiber concrete reinforcement complies with ASTM A820.
- Materials, batching requirements, mixing and testing procedures should comply with the applicable sections of ASTM C 1116/C 1116M and ASTM C 1436.

PRIMARY APPLICATIONS

- Commercial and Industrial Slabs On Ground
- Shotcrete
- Composite Metal Decks
- Overlays
- Airport Pavements
- Highway Pavement
- Hydrodynamic Structures
- Equipment Foundations
- Precast

CHEMICAL AND PHYSICAL PROPERTIES

Fiber Length	1.5in and 2in (38mm and 50mm)
Diameter	Equivalent 0.045" (1.14 mm)
Aspect Ratio	34 and 44
Tensile Strength	140-180 Kpsi (966-1242 MPa)
Deformation	Continuously deformed circular segment
Appearance	Bright and clean wire

PRODUCT USE

MIXDESIGNSANDPROCEDURES: Novocon® XR steel fiber can be added before, during or after the batching of the concrete. Materials, batching requirements, mixing and testing procedures should comply with the applicable sections of ASTM C 1116/C 1116 M and ASTM C 1436.

PLACING: Novocon XR steel fiber reinforced concrete can be pumped and placed using conventional equipment, including shotcrete equipment. Hand screeds, laser screeds and vibratory screeds can be used.

FINISHING: Conventional finishing techniques and equipment can be used when finishing Novocon XR steel fiber concrete. In some cases an extra bull float process is advised and lowering the angle of the floating blades will help to minimize fiber exposure on

the surface. Propex Concrete Systems personnel can help to determine the best solution for you

APPLICATION RATE: The fiber dosage will vary depending on the type of application, concrete mix design and the performance/ toughness requirements of each particular project. Typically, steel fiber dosage will be in the range of 25 lbs to 100 lbs per cubic yard (15 kg to 60 kg per cubic meter). Propex Concrete Systems technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

SAFETY

It is recommended that gloves and eye protection be used when handling or adding Novocon XR steel fiber to concrete.

COMPATIBILITY

Novocon XR steel fibers are compatible with all liquid and mineral admixtures, curing compounds, hardeners and coatings.

PACKAGING & STORAGE

Novocon XR steel fiber is packaged in 55 lb (25 kg), five-ply, paper and polyethylene lined bags. 40 bags per pallet.

TECHNICAL SERVICES

Propex is backed by our team of reinforced concrete specialists who can carefully analyze each project and provide fiber reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

REFERENCE DOCUMENTS

- ASTM A 820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- ASTM C 94/C 94M Standard Specification for Ready-Mixed Concrete.
- ASTM C 1116/C 1116 M Standard Specification for Fiber-Reinforced Concrete.
- ASTM C 1399 Standard Test Method for Obtaining Average Residual-Strength of Fiber-Reinforced Concrete.
- ASTM C 1436 Standard Specification for Materials for Shotcrete.
- ASTM C 1550 Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel).
- ASTM C 1609/C 1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam with Third-Point Loading).
- JCI-SF4 Method of Test for Flexural Strength and Flexural Toughness of Fiber-Reinforced Concrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 506 Guide for Shotcrete.
- ACI 544-3R Guide for Specifying, Proportioning, Mixing, Placing, and Finishing Steel Fiber Reinforced Concrete.



UL® Classified: Type Novocon Steel Fibers for use as an alternate or in addition to the welded wire fabric used in Floor-Ceiling D700, D800, D900 Series Designs. Fibers may also be used in Design Nos. G256, G514. Fibers added to concrete mix at a rate of 10 to 50 lb of fiber for each cubic yard of concrete.

SPECIFICATION CLAUSE

Fibers for concrete shall be Novocon XR.....inch steel fibers conforming to ASTM A820, Type V, Deformed with a minimum tensile strength of 140-180 Kpsi (966-1242 MPa). Unless otherwise stated, Novocon XR steel fibers should be added to the concrete at a rate of.....lbs/yd³ and mixed for sufficient time (75 rotations at a full mixing speed) to ensure uniform distribution of the fibers throughout the concrete. Steel fibers shall be manufactured by Propex Concrete Systems, 6025 Lee Highway, Suite 425, PO Box 22788, Chattanooga, TN 37422, USA, tel: 423 892 8080, fax: 423 892 0157, web site: fibermesh.com.

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